







## ISO/IEC17025 Accredited Lab.

Report No: FCC 0812218 File reference No: 2009-01-23

Applicant: Xiamen Huacheng Lighting Technology Co.,Ltd

Product: Energy Saving Lanp

Brand Name: MINNENG

Model No: MNSP0915 MNSP0918 MNSP0920 MN3U0915 MN3U0918

MN3U0920

Test Standards: FCC Part 18.307

Test result: It is herewith confirmed and found to comply with the requirements

set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: Jan 23, 2009

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

# SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. Chegongmiao, FuTian District, Shenzhen, CHINA.

Tel (755) 83448688 Fax (755) 83442996

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Date: 2009-01-23



# **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

# **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

# FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

### IC- Registration No.: IC5205A-01

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-01.

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#### 1.0 General Details

#### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

Address: East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. CheGongMiao, FuTian District,

Shenzhen, CHINA.

Telephone: (755) 83448688 Fax: (755) 83442996

#### 1.2 Applicant Details

Applicant: Xiamen Huacheng Lighting Technology Co.,Ltd Address: No.75,Huandong Coastal Meixi Road,Xiamen,China

Telephone: +86-592-5826568 Fax: +86-592-5826568

### 1.3 Description of EUT

Product: Energy Saving Lamp

Manufacturer: Fujian Minneng Lighting Technology Co., Ltd.

Address: Inside Government Yard, Wenfeng Town, Zhangzhou, Fujian, China

Brand Name: MINNENG

Model Number: MNSP0915 MNSP0918 MNSP0920 MN3U0915 MN3U0918 MN3U0920

Additional Model Number:

Rating: Input:  $120V_{\sim}$ , 60Hz,  $\leq 25$ 

Remark: --

#### 1.4 Submitted Sample: 6 Sample

#### 1.5 Test Duration

2008-12-31 to 2009-01-23

#### 1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB Radiated Emissions Uncertainty = 4.7dB

1.7 Test Engineer

leng lang

The sample tested by

Print Name: Terry Tong

The report refers only to the sample tested and does not apply to the bulk.

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## List of Measurement Equipment

### 2.1 Conducted Emission Test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESCS30	830245/009	RS	2008.2.23	1Year
Coaxial Switch	MP59B	M70585	ANRITSU	N/A	N/A
LISN	NTFM8132	8132137	SCHWARZBECK	2008.2.24	1Year
LISN	NTFM8134	8134109	SCHWARZBECK	2008.2.24	1Year
LISN	NTFM8136	8136102	SCHWARZBECK	2008.2.24	1Year

#### 3.0 **Technical Details**

3.1 Investigations Requested

Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

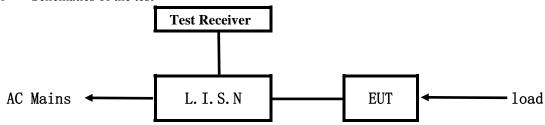
3.2 **Test Standards** 

FCC Part 18 Subpart C



#### 4.0 Conducted Power line Test

#### 4.1 Schematics of the test

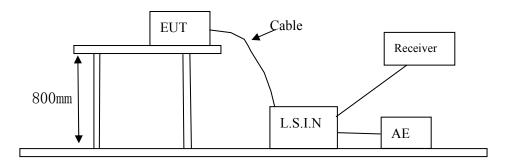


**EUT: Equipment Under Test** 

#### 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2003. Cables and peripherals were moved to find the maximum emission levels for each frequency.

### Block diagram of Test setup



#### 4.3 Power line conducted Emission Limit

Frequency(MHz)	Maximum RF line voltage measured with a 50	
	uH/50 ohm LISN (uV)	
Non-consumer equipment		
0.45-1.6	1000	
1.6-30	3000	
Consumer equipment		
0.45-2.51	250	
2.51-3.0	3000	
3.0-30	250	

Notes:

- 1. \*decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

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3. RF Voltage  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$ 

#### 4.4 Test Results

The frequency spectrum from 0.415MHz to 30MHz was investigated. All reading are peak values with a resolution bandwidth of 9kHz.



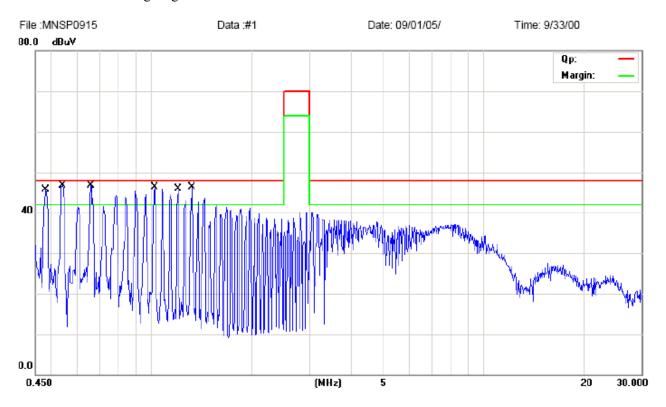
# A: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MNSP0915

Please refer to following diagram for individual



Eraguanav	Reading(dBμV)		Limit
Frequency (MHz)	Live	Neutral	(dBµV)
(IVIIIZ)	AV	AV	AV
0.481	38.75	-	48
0.539	40.61	-	48
0.662	39.54	-	48
1.021	37.11	-	48
1.202	37.88	-	48
1.323	38.43		48

The report refers only to the sample tested and does not apply to the bulk.

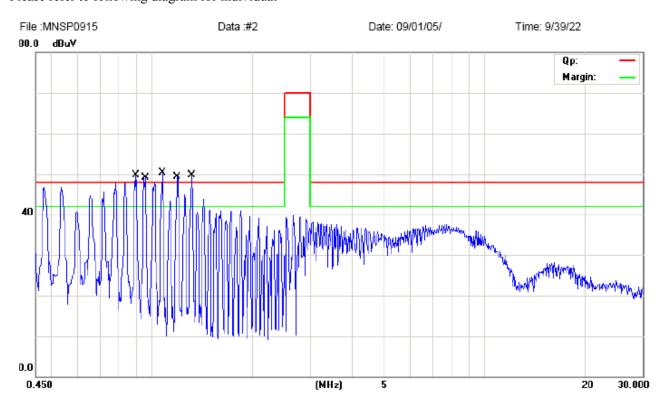


# B: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B
Results: Pass

**Model:** MNSP0915 Please refer to following diagram for individual



Eraguanav	Reading(dBμV)		Limit
Frequency (MHz)	Live	Neutral	(dBµV)
(WIT1Z)	AV	AV	AV
0.901	-	40.20	48
0.953	-	40.85	48
1.080	-	41.83	48
1.197	-	39.88	48
1.317	-	40.33	48

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C:

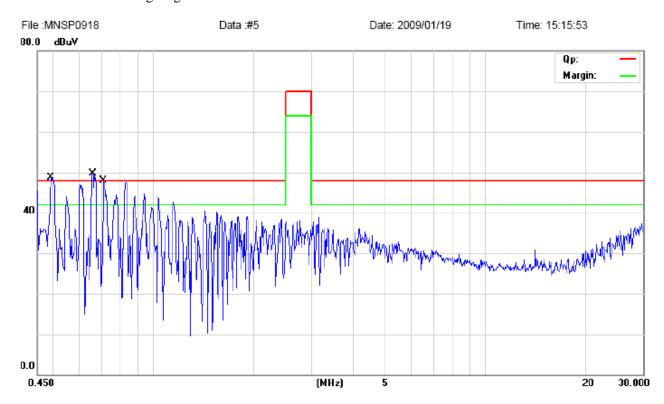


EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MNSP0918

Please refer to following diagram for individual



Eraguanay	Reading(dBμV)		Limit
Frequency (MHz)	Live	Neutral	(dBµV)
	AV	AV	AV
0.495	42.87	-	48
0.659	38.74	-	48
0.715	36.50	-	48

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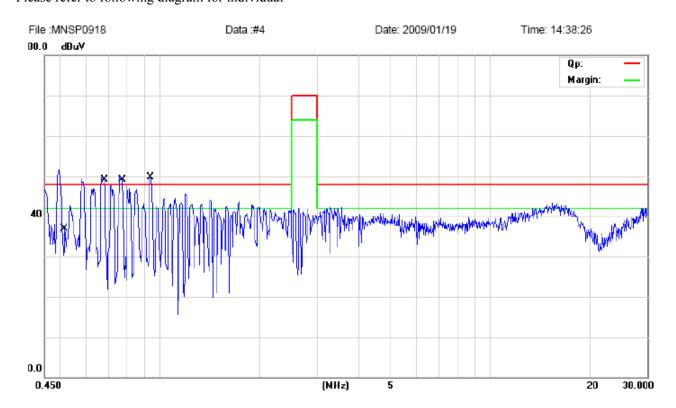
Report No: 0812218 Date: 2009-01-23



EUT set Condition: Normal operation mode

Level Class B
Results: Pass

**Model:** MNSP0918 Please refer to following diagram for individual



Eraguanav	Reading(dBμV)		Limit
Frequency (MHz)	Live	Neutral	(dBµV)
	AV	AV	AV
0.516	-	39.29	48
0.685	-	41.27	48
0.774	-	40.26	48
0.944	-	36.84	48

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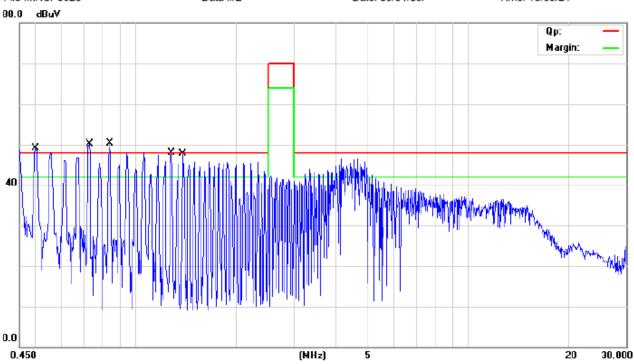
# E: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MNSP0920
Please refer to following diagram for individual

File :MNSP0920 Data :#2 Date: 09/01/05/ Time: 10/35/21



Eraguanay	Reading	g(dBµV)	Limit
Frequency (MHz)	Live	Neutral	(dBµV)
(IVITIZ)	AV	AV	AV
0.502	41.97	-	48
0.724	42.51	-	48
0.839	41.03	-	48
1.281	39.91	-	48
1.392	37.86	-	48

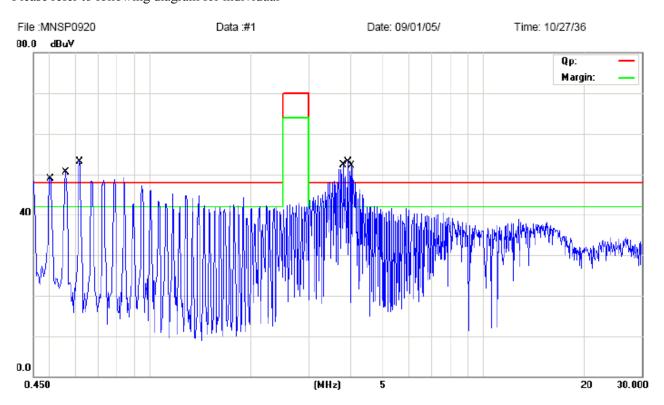


## F: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MNSP0920 Please refer to following diagram for individual



Eraguanav	$Reading(dB\mu V)$		Limit
Frequency (MHz)	Live	Neutral	(dBµV)
(WITIZ)	AV	AV	AV
0.506	-	43.58	48
0.561	-	43.84	48
0.616	-	44.29	48
3.932	-	36.37	48
3.828	-	36.43	48
4.040	-	36.72	48

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# G: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MN3U0915
Please refer to following diagram for individual

File :MN3U0915 Data :#2 Date: 09/01/05/ Time: 15/32/09

90.0 dBuV

40

40

0.0 (MHz) 5 20 30.000

Eraguanay	Reading(dBμV)		Limit
Frequency (MHz)	Live	Neutral	(dBµV)
	AV	AV	AV
0.527	37.10	-	48
0.763	34.65	-	48
0.881	31.47	-	48
1.174	30.87	-	48

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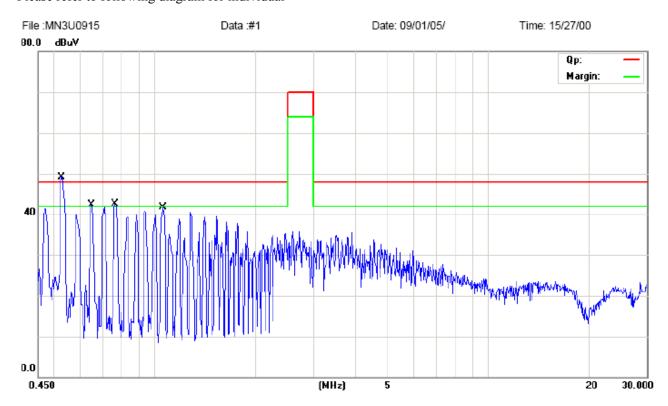


# H: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MN3U0915
Please refer to following diagram for individual



Eraguanay	Reading(dBμV)		Limit
Frequency (MHz)	Live	Neutral	(dBµV)
	AV	AV	AV
0.529	-	41.30	48
0.646	-	33.23	48
0.765	-	32.55	48
1.063	-	33.73	48

The report refers only to the sample tested and does not apply to the bulk.

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I:

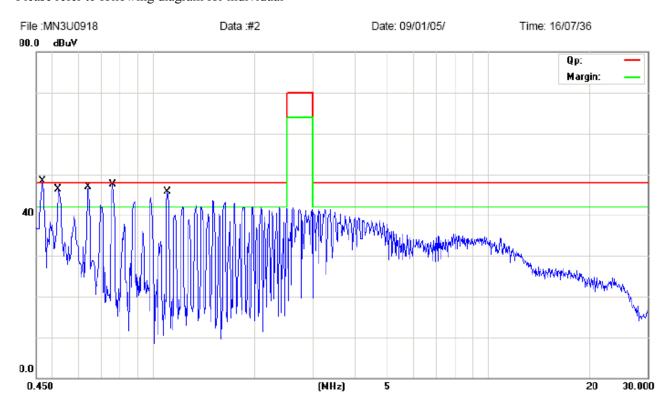


EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MN3U0918

Please refer to following diagram for individual



Eraguanav	Reading(dBμV)		Limit
Frequency (MHz)	Live	Neutral	$(dB\mu V)$
(MHZ)	AV	AV	AV
0.467	40.54	-	48
0.524	40.60	-	48
0.639	39.12	-	48
0.756	39.54	-	48
1.108	37.54	-	48

The report refers only to the sample tested and does not apply to the bulk.

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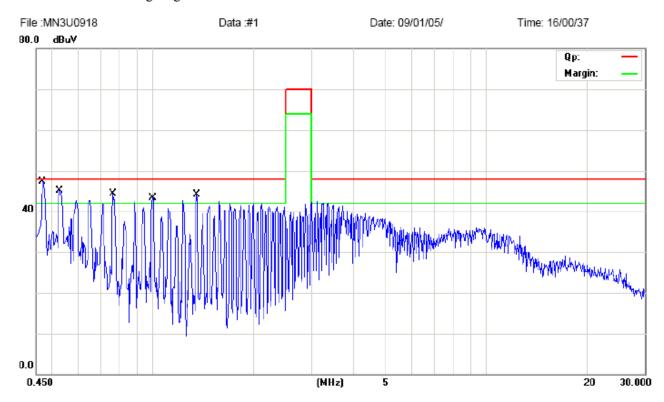
# J: Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MN3U0918

Please refer to following diagram for individual



Frequency (MHz)	Reading(dBμV)		Limit
	Live	Neutral	$(dB\mu V)$
	AV	AV	AV
0.471	-	41.54	48
0.528	-	41.60	48
0.763	-	37.15	48
0.997	-	37.60	48
1.349	-	36.14	48

The report refers only to the sample tested and does not apply to the bulk.

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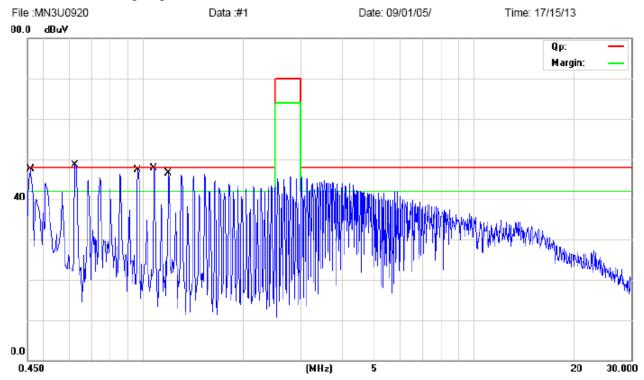
### K: Conducted Emission on Live Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B
Results: Pass

Model: MN3U0920

Please refer to following diagram for individual



Frequency (MHz)	Reading(dBμV)		Limit
	Live	Neutral	(dBµV)
	AV	AV	AV
0.457	36.92	-	48
0.623	42.20	-	48
0.967	39.47	-	48
1.079	38.13	-	48
1.195	36.48	-	48

The report refers only to the sample tested and does not apply to the bulk.



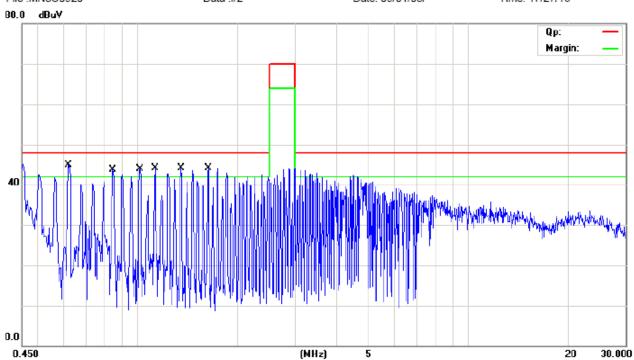
# Conducted Emission on Neutral Terminal of the power line (450kHz to 30MHz)

EUT set Condition: Normal operation mode

Level Class B **Results: Pass** 

**Model:** MN3U0920 Please refer to following diagram for individual

Data :#2 File:MN3U0920 Date: 09/01/05/ Time: 17/27/16 dBuV



Frequency (MHz)	Reading(dBμV)		Limit
	Live	Neutral	(dBµV)
	AV	AV	AV
0.624	-	40.50	48
0.849	-	40.64	48
1.021	-	41.21	48
1.132	-	40.75	48
1.360	-	42.04	48
1.642	-	39.26	48

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#### 5.0 FCC Label

## This device complies with part 18 of FCC Rules.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

#### **Mark Location:**

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# Photo of testing

#### 6.1 Conducted test View--



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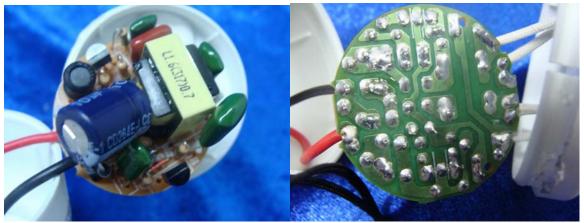
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#### Photo for the EUT

Model: MNSP0915





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Model: MNSP0918





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Photo for the EUT

Model: MNSP0920





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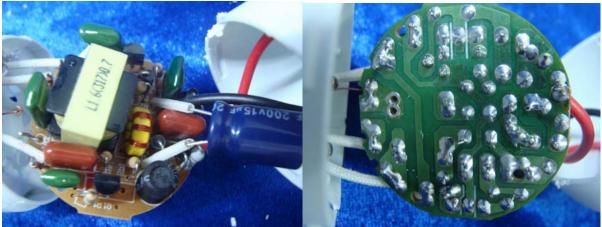
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Photo for the EUT

Model: MN3U0915





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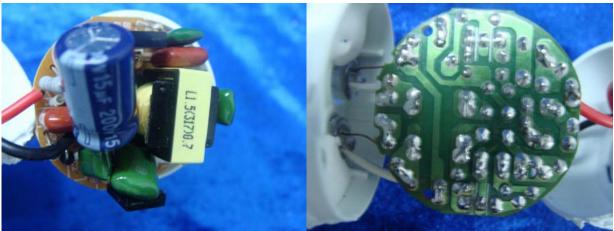
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Photo for the EUT

Model: MN3U0918





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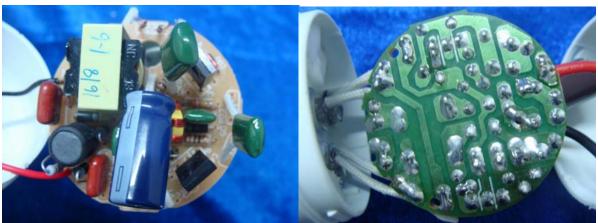
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Photo for the EUT

Model: MN3U0920





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